



Chattanooga-Hamilton County Air Pollution Control Bureau

April 21, 2017

Ms. Beverly Banister
Director
Air, Pesticides, and Toxics Management Division
USEPA Region IV
61 Forsyth Street
Atlanta, Georgia 30303-8960

Dear Ms. Banister:

This letter is to inform EPA Region 4 of the Chattanooga-Hamilton County Air Pollution Control Bureau's (CHCAPCB) intent to submit a demonstration request for Exceptional Event status for data in November, 2016, during wildfires in the Tennessee/Georgia area. Large wildfires partially encircled Hamilton County on Mowbray and Signal Mountains in Tennessee; Lookout Mountain in Georgia; and in nearby counties both in Tennessee and Georgia. From November 7-November 23 these fires produced massive amounts of smoke that affected Hamilton County and increased PM_{2.5} data to record high levels. The November 14 data at 105.7 µg/m³ was significantly higher than any Federal Reference Monitor (FRM) data since PM_{2.5} FRM monitoring began in Hamilton County January 1, 1999. The FRM data for November 8, 11, and 17 were affected by the smoke but the data did not exceed 35 µg/m³. Data not exceeding 12 µg/m³ has been omitted from Figure 1. The Walker Co., Georgia, data has been included in this chart as a courtesy. Other data days not requested for Exceptional Event status may have been affected.

Figure 1
All data in µg/m³

Date	470654002-1 Siskin Drive	470654002-2 Siskin Drive	470650031 Tombras Avenue	130950002 Maple St. Walker Co. GA
November 8	15.2	15.2	-	-
November 11	-	-	13.9	Void
November 14	105.7	105.7	Void	84.3
November 17	21.0	21.1	18.0	16.9

At EPA's request the Chattanooga-Hamilton County data was flagged initially in AQS with informational "IT" flags. Those flags are now changed to "rt" flags indicating that EPA will formally be sent Exceptional Event requests to exclude this data.

A tanker plane and Blackhawk helicopters were brought in to fight the fires on Mowbray and Signal Mountains because of the difficulty of effectively containing fires on mountain slopes under extremely dry weather conditions and because of the proximity of the fires to residential areas. Some residents of both mountains were evacuated temporarily, and additional firefighters were sent in from around the southeast, Texas, California, Nevada, and Oregon to assist. A Blackhawk

helicopter was also used with the Lookout Mountain/Dade County fires, and outside firefighters were called in to assist.

The *Chattanooga Times Free Press* on November 17 in an article entitled "Choking on Smoke" published a list of major fires in Hamilton and nearby counties both in Tennessee and Georgia. These are listed in Figure 2. The most devastating effects on Hamilton County air quality were the fires on Signal Mountain, Lookout Mountain/Dade County, Mowbray Mountain, and the particularly large Rough Ridge fire in North Georgia.

Hamilton County is bordered on the east by White Oak Mountain and on the west by Mowbray, Signal, Elder, Raccoon, and Lookout Mountains. The county is bisected down the middle by Big Ridge and Missionary Ridge, part of the same ridge chain. The ridge name changes where the Tennessee River runs through the ridge horizontally. The "A" shaped valley is such that when smoke infiltrates, it fills the valley and lingers.

Note that the Rough Ridge fire of North Georgia of 23,000 acres was only 30% contained by November 17. This fire was in the Cohutta Wilderness in the Chattahoochee National Forest about 13 miles west of Blue Ridge, Georgia, in Fannin County. It began with a lightning strike on October 16, 2016.

Figure 2

Fire Name	Location	Size	Contained by 11/17
Major Tennessee Wildfires			
Flipper Bend	Hamilton Co., Signal Mt.	1,000 acres by 11/17	95%
Poe Road	Hamilton Co.	686 acres by 11/17	60 %
Mowbray Mt	Hamilton Co., Mowbray Mt.	830 acres by 11/17	70 %
Hobbs town	Sequatchie Co.	65 acres by 11/17	100%
Sunshine	Sequatchie Co.	65 acres by 11/17	100%
Bench Bluff	Bledsoe Co.	1400 acres by 11/17	100%
Major Georgia Wildfires			
Rough Ridge	Fannin Co.	23,000 by 11/17	30%
Fox Mountain	Dade Co./Rising Fawn	2,039 by 11/17	100%
Rocky Face	Whitfield Co.	590 by 11/17	99%
Tatum Gulf	Dade Co.	1600 by 11/17	15%
Sulfur Springs	Dade Co., Lookout Mt.	500 by 11/17	100%
Treat Mt.	Polk/Haralson Counties	583 by 11/17	99%
Rock Mountain	Rabun Co.	5,484 by 11/17	10%
Flat Branch	Rabun/Towns Counties	600 by 11/17	4%
Creek Road	Dade Co.	100 acres by 11/17	98%
Timber Bluff	Rabun Co.	850 Acres by 11/17	15%
* List excerpted from "Choking on Smoke" article in <i>Chattanooga Times Free Press</i> 11/17/16			

Figure 3

Agency	State	County	Event Name in AQS	Type of Event in AQS	Site	AQS ID	µg/m3	Sample Date of the Event	FRM Monitor Exceedance µg/m3
CHCAPCB	TN	Hamilton	US Wildfires	Flagged as "rt"	Siskin Dr.	47065 4002-1	>35	11/14/2016	105.7
CHCAPCB	TN	Hamilton	US Wildfires	Flagged as "rt"	Siskin Dr.	47065 4002-2	>35	11/14/2016	105.7
State: GA	GA	Walker Co., GA	US Wildfires	Flagged as "IT" by GA	Maple St.	13295 0002	>35	11/14/2016	84.3
Data Affected: >12 but <35 µg/m3									
CHCAPCB	TN	Hamilton	US Wildfires	Flagged as "rt"	Siskin Dr.	47065 4002-1	<35 >12	11/8/2016	15.2
CHCAPCB	TN	Hamilton	US Wildfires	Flagged as "rt"	Siskin Dr.	47065 4002-2	<35 >12	11/8/2016	15.2
CHCAPCB	TN	Hamilton	US Wildfires	Flagged as "rt"	Siskin Dr.	47065 4002-1	<35 >12	11/17/2016	21.0
CHCAPCB	TN	Hamilton	US Wildfires	Flagged as "rt"	Siskin Dr.	47065 4002-2	<35 >12	11/17/2016	21.1
CHCAPCB	TN	Hamilton	US Wildfires	Flagged as "rt"	Tombras Av.	47065 0031	<35 >12	11/11/2016	13.9
CHCAPCB	TN	Hamilton	US Wildfires	Flagged as "rt"	Tombras Av.	47 065 0031	<35 >12	11/17/2016	18.0
State: GA	GA	Walker Co., GA	US Wildfires	Flagged as "IT" by GA	Maple St.	13295 0002	<35 >12	11/17/2016	16.9

Chattanooga-Hamilton County's design values are lower than the standards for the three year period 2014-2016 when including the smoke affected data, but a request for Exceptional Event status is being submitted because the magnitude of the data for each of the next two years cannot be anticipated. It seems prudent to make the submission while EPA is reviewing other submissions for the same event.

EPA has requested that this letter provide the current design values for affected sites and the design values with the affected data removed. Because the data is already of low magnitude, the design values are affected minimally. The daily design value does not appear to change when affected data is removed. The design values are in Figure 4.

Figure 4
All data in µg/m3

Site	Design Value 2014-16 Yearly Standard	Design Value 2014-16 Daily Standard	DV 2014-16 Yearly 11/14 Removed	DV 2014-16 Daily 11/14 Removed	DV 2014-2016 Yearly All flagged Removed	DV 2014-2016 Daily All flagged Removed
470654002 Siskin Dr	8.7	17	8.4	17	8.4	17
470650031 Tombras Ave	8.6	18	11/14: Void	18	8.6	18

Figure 5 indicates the one year quarterly average for 2016. This chart indicates that the yearly average would benefit by about 1 $\mu\text{g}/\text{m}^3$ to have the affected data removed from the data set.

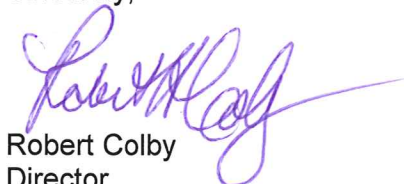
Figure 5
All data in $\mu\text{g}/\text{m}^3$

Site	2016 Quarterly Avg	2016 Quarterly Avg Excluding 11/14	2016 Quarterly Avg Excluding All Flagged
470654002 Siskin Dr.	8.9	8.1	7.9
470650031 Tombras Ave.	*8.0	8.0	7.9
*11/14 was a Void for the Tombras site			

EPA has requested a target date for submittal of the Exceptional Event package to Region 4. The State of Tennessee plans to post the state and local agency wildfire demonstrations for public comment and to submit the demonstrations to Region 4 by July 1, 2017. If a workgroup is formed and the Bureau participates, the date of submittal may be later.

I trust that this letter satisfies the requirements to notify EPA of an impending Exceptional Event submission request and to notify EPA of extreme data that exceeds the standard. If you have any questions please feel free to contact me or Kathy Jones, Air Monitoring Manager, at (423) 643-5980.

Sincerely,



Robert Colby
Director
CJ

C: Ms. Beverly Banister, Mr. Gregg Worley, Mr. Todd Rinck, Mr. Darren Palmer,
Ms. Sara Waterson, EPA
Mr. Jason Stephens, Mr. Robert Brawner, Mr. Billy Pugh, State of Tennessee: e-mail
Ms. DeAnna Oser, State of Georgia: e-mail